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09/751,999	12/29/2000	Ali Najib Saleh	CIS0008C1US	8353

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CAMPBELL STEPHENSON LLP
11401 CENTURY OAKS TERRACE
BLDG. H, SUITE 250
AUSTIN, TX 78758

EXAMINER
NGUYEN, HANH N

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)
Office Action Summary		09/751,999	SALEH ET AL.
		Examiner	Art Unit	
		Hanh Nguyen	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Amendment filed on 1/14/08*.

2a) ☒ This action is **FINAL.**   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *See Continuation Sheet* is/are rejected.

7) ☒ Claim(s) *54* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date *1/15/08*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 38-70,111,113-124,126-137,139-150,152-163,165-177,179-191,193-205 and 207-218.

Continuation of Disposition of Claims: Claims rejected are 38-53,55-70,111,113-124,126-137,139-150,152-163,165-177,179-191,193-205 and 207-218.

DETAILED ACTION

Response to Amendment

Amendment filed on 1/14/08 has been entered.

Due to clerical error, Claim 54 should have been indicated as allowable subject mater in the previous office action. Examiner now indicates that claim 54 is objected to as being dependent on its parent claim.

Regarding claims 163, 177, 191 and 205, applicant argues in the Remark, page 40 that Fukushima et al. does not disclose sending the link state information from the down stream node and sending an ACK from the down stream node.

Examiner does not agree because Fukushima et al. discloses receiving a hello packet at a downstream node, wherein said hello packet comprises a link state advertisement (see see col.10, lines 15-30, fig.8. step 121, router 30 receives hello packets, wherein the hello packet comprises network link state information. See step 124); processing said link state advertisement comprises sending said link state information from down stream node (see fig.8, steps; 125 col.10, lines 25-30; sending the network link state information to protocol information manager module 15); sending link states acknowledgement from the downstream node (see fig.8, step 125, col.10, lines 26-40; the sending of network link state information is an acknowledgement which the manager 15 checks if the received information is the network linkstate information, see fig.9, steps 131, 133).

Regarding claims 111, 124, 137, 150, applicant argues that Fukushima et al. does not

disclose said at least one node identifies a node in a network for which said sending

node seeks link state advertisement. Examiner does not agree because in Fukushima

et al., the network link state information exchanged between two routers include ID of

the advertising router (ID of the sending node), identity of the network as well as the

address of interface to which the advertising router is connected (see col.1, lines 60-

65). Further (in col.2, lines 10-20), each router while receiving hello packets and

network link state information, manages states of other routers on the network to which

this router is connected. The each router manages the routers' ID's, and checks if each

of those routers is aware of this router, or checks if **each of those routers has**

completed the reception of network link state information (the fact that each of

those routers has received the network link state information clearly indicates that the

received network link state information has an identifier identifying a node for which the

network link states information is destined).

Response to Arguments

Applicant's arguments with respect to claims 38-70, 111, 113-124, 126-137, 139-

150, 152-163, 165-177, 179-191, 193-205, 207-218 have been considered but are moot

in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

Claims 38-52, 55, 56, 57-68 are rejected under 35 USC 103(a) as being

unpatentable over Spiegel et al. (US pat. 5,649,108) in view of Perlman (Us pat.

5,455,865).

*In claim 38, 39, 49, 50, 51, 57, note; the protocol packet is further defined in

claim 62 as "a create path packet"; claim 70 as "a configure packet". Therefore,

examiner cites "a request /connection setup packet" in Spiegel as one of these packet

above. Spiegel et al. discloses a method comprising transmitting a protocol packet from

an origin node to neighbors of the origin nodes to find the target node (see ATM

network in figure 1, and fig. 4; source node transmits a request /connection setup

packet via intermediate nodes to destination node; col.5, line 35 to col.6, line 50); the

protocol packet is configured to record a protocol packet path from the origin node to

the target node (see fig.3, col.5, lines 62 to col.6, line 15; each a connection setup

packet contains source address, destination address (for claim 39), a source route

which is a list of nodes that the connection setup packet should pass through, and a

record route which is a list of nodes through which the connection has already been

established); the protocol packet comprises information regarding a topology of at least

a portion of said network (the topology of the at least a portion of network is source

address, destination address, VCI (claim 49), cost 35 (claim 50), QOS parameters (

claim 51; col.6, lines 45-52); a source route and a record route). Spiegel does not

disclose broadcasting the protocol packet to a plurality of neighbors of said origin node.

Perlman discloses in fig.1, a source node 16 transmits a data packet to a a destination

node 24 via alternative routes (see col.4, lines 45-60). The source node 16 first

identifies its neighbor nodes by broadcasting link state packet to entire network (see

col.6, lines 1-7 and step 94 in fig.3B). The link state packet comprises neighbor ID's 78

(see fig.3A, col.6, lines 28-32). Therefore, it would have been obvious to one ordinary

skilled in the art to combine the teaching of broadcasting link state packet to neighbor

nodes of Perlman with the teaching of Spiegel in order to determine network topology

before transmitting packet from source to destination and avoid link failure during

transmission.

        *In claims 40-48, 52, the limitations of theses claims have been address in claim

38.

        *In claim 58, Spiegel et al. discloses protocol packet is restore path packet (see

fig.3, step 306; col.5, lines 47-53 or pack message at fig.5, steps 504).

        * In claim 55, Spiegel discloses link state advertisement field (control flag 38;

fig.3).

        * In claim 56, Spiegel et al. discloses a neigbor field (destination node 31; fig.3) ;

and a link cost field (see fig.3, cost 35)

        *In claim 59, Spiegel et al. discloses a virtual path ID field (see fig.2; forwarding

table 20 including VCI identification and fig.3, VCI 32).

        *In claim 60, Spiegel et al. discloses a path length field / link cost field (see fig.3,

soure route 33, cost 35).

        *In claim 62, Spiegel et al. discloses protocol packet is a create path packet (

connection/setup path packet; see claim 38).

*In claim 61, Spiegel et al. discloses path array (fig.1 shows spans AB, BD, DF, FG).

*In claims 63 and 65, the limitations of this claim have been addressed in claims 59, 60 and 61.

*In claim 64, Spiegel et al. discloses a delete path packet (see fig.4, step 55; VC connection request is rejected; col.7, lines 50-55).

Claims 66-68 have been addressed in claim 38.

Claims 111, 113-124, 126-137, 139-150, 152-163, 165-177, 179-191, 193-205 and 207-218 are rejected under 35 USC 102(e) as being anticipated by Fukushima et al. (Pat. 6,490,246 B2).

In claims 111, 124, 137, 150, Fukushima et al. discloses, a method of processing a get link state advertisement packet comprising receiving the get link state advertisement packet (fig.8, step 121, receiving a Hello packet/ routing protocol packet) at a downstream node (at routers 30; col.10, lines 20-25; fig.1), wherein the get link state advertisement packet (the Hello packet) is sent by a sending node (from router calculating unit 11; fig.2), the get link state advertisement packet comprises at least one node identifier (see col.1, lines 45-50; the hello packet comprises a list of other routers'Ids in the same network); said at least node Id (each router) identifies a node in the network for which the sending node seeks link state advertisement (see col.2, lines 15-20; checks if each of routers has received network link state information and in col.2, lines 27-32, " if there is any other router from which the router has not received hello packet for longer than a fixed period, the router decides that a failure has occurred in

this other router"). The downstream node and said sending node are nodes in the

network (the two routers are connected to the same network); sending at least one link

state advertisement from the down stream node to the sending node (fig.8, steps 122,

124 and fig.9. steps 131, 133; network link state information received from neighbor

node); and sending an acknowledgement of the at least one link state advertsement to

the downstream node (fig.9, step 135 and fig,10, step 143, sending update

information).

In claims 163, 177, 191 and 205, Fukushima et al. discloses receiving a hello

packet at a downstream node, wherein said hello packet comprises a link state

advertisement (see see col.10, lines 15-30, fig.8. step 121, router 30 receives hello

packets, wherein the hello packet comprises network link state information. See step

124); processing said link state advertisement comprises sending said link state

information from down stream node (see fig.8, steps; 125 col.10, lines 25-30; sending

the network link state information to protocol information manager module 15); sending

link states acknowledgement from the downstream node (see fig.8, step 125, col.10,

lines 26-40; the sending of network link state information is an acknowledgement which

the manager 15 checks if the received information is the network linkstate information,

see fig.9, steps 131, 133).

Claims 113-123, 152-162, 165-176 and 207-218 are rejected because they

depend on their parent claims.

Claims 126-136, 139-149, 179-190 and 193-204 are rejected under 35 USC 103(a) as being unpatentable over Fukushima et al. (Pat. 6,490,246 B2).

Claims 126-136, 139-149, 179-190 and 193-204 are rejected because they depend on their parent claims 124, 137, 177 and 191 respectively.

Claims 53, 69, 70 are rejected under 35 USC 103(a) as being unpatentable over Spiegel et al. (US pat. 5,649,108) in view of Fukushima et al. (Pat. 6,490,246 B2).

*In claim 53, Spiegel et al. does not disclose the protocol packet is a hello packet. Fukushima et al. discloses in figure 8, step 121, the packet received at the node is protocol packet such as hello packet (see col.10, lines 20-25). Therefore, it would have been obvious to transmit protocol/hello packet in Spiegel et al. to update network topology.

In claims 69 and 70, Spiegel does not discloses protocol packet is a link down packet. The office notice notice is taken that it is well-known skill in the art that when a link or a router is down, a protocol packet such as a link down packet is transmitted to the sender router to notify that the router has been down. For the configured packet, Fukushima discloses, in col.2, lines 25-35, that if a router has not received hello packet from other routers for longer than a fixed period, the router updates the contents of routing table and establishes another path to avoid the faulty router (protocol packet is a configure packet). Therefore, it would have been obvious that the protocol packet can be a link down packet to notify that a router has failed or a configured packet when the router establishes an alternate path.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsukakoshi et al. (Pat. 6,496,510 B1);

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Thursday from 8:30AM to 4:30PM. The examiner can also be reached on alternate.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Field , can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 703-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hanh Nguyen/
Primary Examiner, Art Unit 2616